AE502.3.1 Nationally Recognized Footing Designs and Materials.

(a) Materials for footings must provide equal load-bearing capacity as required by this section. Footings must be placed on undisturbed soil or fill compacted to 90 percent of maximum relative density. A footing must support every pier. Footings are to be one of the following:

(1) *Concrete.*

(i) Four inch nominal precast concrete pads meeting or exceeding ASTM C 90–02a, Standard Specification for Loadbearing Concrete Masonry Units, **with or** without reinforcement, **providing a minimum** 28-day compressive strength of 1,200 pounds per square inch (psi); or

(ii) Six inch minimum poured-inplace concrete pads, slabs, or ribbons **providing a minimum** 28-day compressive strength of 3,000 pounds per square inch (psi). Site-specific soil conditions or design load requirements may also require the use of reinforcing steel in cast-in-place concrete footings.

(2) *ABS footing pads.*

(i) ABS footing pads are permitted, provided they are installed in accordance with the pad manufacturer installation instructions and certified for use in the soil classification at the site.

(ii) ABS footing pads must be listed or labeled for the required load capacity.

(b) Placement

Footings must be designed using methods and practices that prevent the effects of frost heave by one of the following methods:

(1) *Conventional footings.* Conventional footings must be placed below the frost line depth per Table R301.2(1) unless an insulated foundation or monolithic slab is used.

(2) *Monolithic slab systems.* A monolithic slab is permitted above the frost line when all relevant site-specific conditions, including soil characteristics, site preparation, ventilation, and insulative properties of the under floor enclosure, are considered and anchorage requirements are accommodated as set out in **the manufacturer's installation instructions**. The monolithic slab system must be designed by an **Indiana design professional**:

(i) In accordance with acceptable engineering practice to prevent the effects of frost heave; or

(ii) In accordance with SEI/ASCE 32–01.

(3) *Insulated foundations*. An insulated foundation is permitted above the frost line, when all relevant site-specific conditions, including soil characteristics, site preparation, ventilation, and insulative properties of the under floor enclosure, are considered, and the foundation is designed in compliance with section R403 or by an **Indiana design professional**.

(i) In accordance with acceptable engineering practice to prevent the effects of frost heave; or

(ii) In accordance with SEI/ASCE 32–01.

(c) Sizing;

The sizing and layout of footings, piers and support systems shall be **designed based upon the loadbearing capacity of the soil and the structural loads being transferred to the soil by the manufactured home. See the home manufacturer's installation instructions for pier size, location and design capacity.**